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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,072	09/30/2003	Yumin Tao	1288R	5528

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EXAMINER	
COLLINS, CYNTHIA E	
ART UNIT	**PAPER NUMBER**
1638	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,072	TAO ET AL	
	Examiner	Art Unit	
	Cynthia Collins	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 30, 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-47* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7, 9 and 13, drawn to an isolated nucleic acid, a vector, an expression cassette, a host cell and a transgenic plant, classified in class 536, subclass 23.6, for example.

II. Claim 8, drawn to an isolated protein, classified in class 530, subclass 370, for example.

III. Claims 10-12 and 14, drawn to a method for modulating CHD activity in a host cell by transforming a host cell with at least one expression cassette of claim 4, classified in class 435, subclass 468, for example.

IV. Claim 15, drawn to a method for transiently modulating CHD activity in host cells by introducing at least one CHD nucleic acid of claim 1 to produce a transformed cell, classified in class 435, subclass 471, for example.

V. Claim 16, drawn to a method for transiently modulating CHD activity in host cells by introducing at least one polypeptide of claim 8 to produce a transformed cell, classified in class 435, subclass 244, for example.

VI. Claim 17, drawn to a method for enhancing tissue culture response in a host cell by introducing into the host cell at least one unidentified CHD polypeptide, classified in class 435, subclass 244, for example.

VII. Claim 17, drawn to a method for enhancing tissue culture response in a host cell by introducing into the host cell at least one unidentified CHD polynucleotide, classified in class 435, subclass 471, for example.

VIII. Claim 18, drawn to a method for inducing somatic embryogenesis in a host cell by introducing into a responsive host cell at least one unidentified CHD polypeptide, classified in class 435, subclass 430.1, for example.

IX. Claim 18, drawn to a method for inducing somatic embryogenesis in a host cell by introducing into a responsive host cell at least one unidentified CHD polynucleotide, classified in class 435, subclass 468, for example.

X. Claim 19-22, drawn to a method for positive selection of a transformed cell by introducing into a responsive cell at least one unidentified CHD polypeptide, classified in class 435, subclass 430.1, for example.

XI. Claim 19-22, drawn to a method for positive selection of a transformed cell by introducing into a responsive cell at least one unidentified CHD polynucleotide, classified in class 435, subclass 468, for example.

XII. Claim 23, drawn to a method for inducing apomixis in a plant cell by introducing into a responsive plant cell at least one unidentified CHD polypeptide, classified in class 435, subclass 430.1, for example.

XIII. Claim 23, drawn to a method for inducing apomixis in a plant cell by introducing into a responsive plant cell at least one unidentified CHD polynucleotide, classified in class 435, subclass 468, for example.

XIV. Claim 24-28, drawn to a method for increasing transformation efficiency by introducing at least one unidentified CHD polypeptide and transforming with a gene of interest into a responsive host cell, classified in class 435, subclass 468, for example.

XV. Claim 24-28, drawn to a method for increasing transformation efficiency by introducing at least one unidentified CHD polynucleotide and transforming with a gene of interest into a responsive host cell, class 435, subclass 468, for example.

XVI. Claim 29, drawn to a method for increasing recovery of regenerated plants by introducing into a responsive plant cell at least one unidentified CHD polypeptide, classified in class 435, subclass 430, for example.

XVII. Claim 29, drawn to a method for increasing recovery of regenerated plants by introducing into a responsive plant cell at least one unidentified CHD polynucleotide, classified in class 800, subclass 278, for example.

XVIII. Claim 30, drawn to a method for decreasing gene silencing by stably transforming at least one unidentified CHD polypeptide and a gene of interest into a host cell, classified in class 435, subclass 471, for example.

XIX. Claim 30, drawn to a method for decreasing gene silencing by stably transforming at least one unidentified CHD polynucleotide and a gene of interest into a host cell, classified in class 435, subclass 471, for example.

XX. Claim 31, drawn to a method for increasing oil production in a host cell by stably transforming a host cell with an unidentified CHD polynucleotide operably linked to a promoter, classified in class 435, subclass 471, for example.

XXI. Claim 32-39, 43 and 46, drawn to an isolated nucleic acid, a vector, an expression cassette, a host cell and a transgenic plant, classified in class 800, subclass 298, for example.

XXII. Claim 40-42, drawn to a method for modulating CHD activity in a plant by transforming a plant cell with at least one expression cassette of claim 35, classified in class 435, subclass 468, for example.

XXIII. Claim 44, drawn to a method for transiently modulating the level of CHD activity in host cells by transforming host cells with a gene of interest and introducing at least one CHD nucleic acid of claim 32 to said host cells, classified in class 435, subclass 471, for example.

XXIV. Claim 45, drawn to an isolated protein, classified in class 530, subclass 370, for example.

XXV. Claim 47, a method for transiently modulating the level of CHD activity in host cells by transforming host cells with a gene of interest and introducing at least one CHD polypeptide of claim 45 to said host cells, classified in class 435, subclass 471, for example.

For inventions I-V above, restriction to a single nucleotide and/or amino acid sequence is also required under 35 USC 121. Therefore, upon election of any of inventions I-V, a single nucleotide and/or amino acid must also be elected.

Applicants are reminded that nucleotide sequences encoding different proteins, and the amino acid sequences they encode, are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute **independent and distinct** inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleotide and amino acid sequence is presumed to represent an independent and

distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq. This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of a single genus of invention, but constitutes an independent and patentably distinct invention.

The inventions are distinct, each from the other because of the following reasons:

Invention I and inventions II and V-XXV are distinct inventions. The isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention I are classified separately from, and differ in structure, function and use from, the isolated proteins of inventions II and XXIV. The isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention I differ in structure from the isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention XXI. The methods of inventions V-XX, XXII-XXIII and XXV are classified separately from, and do not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention I.

Invention I and inventions III-IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the expression cassette of claim 4 can be used in a materially different process of using that product, such as a method for producing an isolated CHD protein. In the instant case the CHD nucleic acid of claim 8 can be used in a materially different process of using that product, such as a hybridization method.

Invention II and inventions III-IV and VI-XXV are distinct inventions. The isolated protein of invention II is classified separately from, and differs in structure, function and use from, the isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention XXI. The isolated protein of invention II differs in structure from the isolated protein of invention XXIV. The methods of inventions III-IV, VI-XX, XXII-XXIII and XXV. are classified separately from, and do not require the use of or result in the production of, the isolated protein of invention II.

Inventions II and V are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the isolated protein can be used in a materially different process of using that product, such as in an immunoassay or as an immunogen.

Invention III and inventions IV-XXV are distinct inventions. The method of invention III is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention III is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention III utilizes different materials and different method steps than the methods of inventions IV-XX, XXII-XXIII and XXV.

Invention IV and inventions V-XXV are distinct inventions. The method of invention IV is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI.

The method of invention IV is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention IV utilizes different materials and different method steps than the methods of inventions V-XX, XXII-XXIII and XXV.

Invention V and inventions VI-XXV are distinct inventions. The method of invention V is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention V is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention V utilizes different materials and different method steps than the methods of inventions VI-XX, XXII-XXIII and XXV.

Invention VI and inventions VII-XXV are distinct inventions. The method of invention VI is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention VI is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention VI utilizes different materials and different method steps than the methods of inventions VII-XX, XXII-XXIII and XXV.

Invention VII and inventions VIII-XXV are distinct inventions. The method of invention VII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention VII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention

VII utilizes different materials and different method steps than the methods of inventions VIII-XX, XXII-XXIII and XXV.

Invention VIII and inventions IX-XXV are distinct inventions. The method of invention VIII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention VIII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention VIII utilizes different materials and different method steps than the methods of inventions IX-XX, XXII-XXIII and XXV.

Invention IX and inventions X-XXV are distinct inventions. The method of invention IX is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention IX is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention IX utilizes different materials and different method steps than the methods of inventions X-XX, XXII-XXIII and XXV.

Invention X and inventions XI-XXV are distinct inventions. The method of invention X is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention X is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention X utilizes different materials and different method steps than the methods of inventions XI-XX, XXII-XXIII and XXV.

Invention XI and inventions XII-XXV are distinct inventions. The method of invention XI is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XI is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XI utilizes different materials and different method steps than the methods of inventions XII-XX, XXII-XXIII and XXV.

Invention XII and inventions XIII-XXV are distinct inventions. The method of invention XII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XII utilizes different materials and different method steps than the methods of inventions XIII-XX, XXII-XXIII and XXV.

Invention XIII and inventions XIV-XXV are distinct inventions. The method of invention XIII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XIII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XIII utilizes different materials and different method steps than the methods of inventions XIV-XX, XXII-XXIII and XXV.

Invention XIV and inventions XV-XXV are distinct inventions. The method of invention XIV is classified separately from, and does not require the use of or result in the production of,

the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XIV is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XIV utilizes different materials and different method steps than the methods of inventions XV-XX, XXII-XXIII and XXV.

Invention XV and inventions XVI-XXV are distinct inventions. The method of invention XV is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XV is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XV utilizes different materials and different method steps than the methods of inventions XVI-XX, XXII-XXIII and XXV.

Invention XVI and inventions XVII-XXV are distinct inventions. The method of invention XVI is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XVI is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XVI utilizes different materials and different method steps than the methods of inventions XVII-XX, XXII-XXIII and XXV.

Invention XVII and inventions XVIII-XXV are distinct inventions. The method of invention XVII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XVII is classified separately from, and does not

require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XVII utilizes different materials and different method steps than the methods of inventions XVIII-XX, XXII-XXIII and XXV.

Invention XVIII and inventions XIX-XXV are distinct inventions. The method of invention XVIII is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XVIII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XVIII utilizes different materials and different method steps than the methods of inventions XIX-XX, XXII-XXIII and XXV.

Invention XIX and inventions XX-XXV are distinct inventions. The method of invention XIX is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XIX is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XIX utilizes different materials and different method steps than the methods of inventions XX, XXII-XXIII and XXV.

Invention XX and inventions XXI-XXV are distinct inventions. The method of invention XX is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI. The method of invention XX is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention

XX utilizes different materials and different method steps than the methods of inventions XXII-XXIII and XXV.

Invention XXI and inventions XXIV-XXV are distinct inventions. The isolated nucleic acid, vector, expression cassette, host cell and transgenic plant of invention XXI are classified separately from, and differ in structure, function and use from, the isolated protein of invention XXIV. The method of invention XXV is classified separately from, and does not require the use of or result in the production of, the isolated nucleic acid, vector, expression cassette, host cell or transgenic plant of invention XXI.

Invention XXII and inventions XXIII-XXV are distinct inventions. The method of invention XXII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XXII utilizes different materials and different method steps than the methods of inventions XXIII and XXV.

Invention XXIII and inventions XXIV-XXV are distinct inventions. The method of invention XXIII is classified separately from, and does not require the use of or result in the production of, the isolated protein of invention XXIV. The method of invention XXIII utilizes different materials and different method steps than the method of invention XXV.

Inventions XXIV and XXV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the isolated protein can be used in a materially different process of using that product, such as in an immunoassay or as an immunogen.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, their recognized divergent subject matter, and the requirement for different areas of search, restriction for examination purposes as indicated is proper.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the

process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cynthia Collins
Primary Examiner
Art Unit 1638

CC

Cynthia Collins
11/20/05